Qwest Foundation for Education
Competitive Sub-grant Proposal Assurance Sheet

Project Title: Creative Media: Fiber-optic Field Trip Course Amount of Request: $ 9961.93

Name of Certificated Teacher (or "lead teacher" if more than one): Marc Gee

Name of School currently teaching at: Sugar-Salem High School

District Name: Sugar-Salem School District District Number: #322

Total number of teachers involved (if more than one): 5

Approximate number of students impacted: 150 per year Grade level(s) impacted: 9-12

Content area(s) impacted: Science and Technology

I certify that if I receive a Qwest Foundation for Education Grant –

- **I agree to create a 5-minute video highlighting my project for the purposes of sharing best practices with other Idaho K-12 teachers.**
- **I agree to do one presentation on my project to other Idaho K-12 teachers before October 31, 2011.**
- **I agree to submit an electronic report to the Idaho State Department of Education before October 31, 2011.**

Superintendent Name (print) Alan Dunn	E-mail adunn@sugarsalem.com	Telephone 208-356-8802
Signature		
Principal Name (print) Jared Jenks	E-mail jjenks@sugarsalem.com	Telephone 208-356-0274
Signature		
Teacher or Lead Teacher Name (print) Marc Gee	E-mail magee@sugarsalem.com	Telephone 208-356-0274
Signature		
Technology Director (print) Spencer Cook	E-mail scook@sugarsalem.com	Telephone 208-356-8802
Signature		

Submit one digital copy (PDF format) of your proposal by November 19, 2010 via e-mail to:

Jimmy Takata
jtakata@sde.idaho.gov
208.332.6937

***Only one PDF file per teacher applicant will be accepted (this includes the Assurance Sheet).** Faxes will not be accepted.

Qwest Foundation for Education
Sub-Grant Proposal

Abstract
Teachers in the Sugar-Salem School District were recently given the opportunity to tour the Royal Tyrrell Museum of Paleontology in Alberta, Canada. The teachers explored the exhibits and viewed the possible educational opportunities for their students while a guide answered their questions. On the whole, this would be a rather unremarkable experience, except for the fact that these teachers never left the classroom in Sugar City, ID. The presentation was made through the Center for Interactive Learning and Collaboration (CILC) and the Idaho Education Network (IEN). The guide was present at the museum, and through the use of green screen and video editing technologies was able to show the teachers multiple exhibits as if they were right there in the museum. This training was a precursor for Sugar-Salem students taking similar trips. It is the intention of Sugar-Salem High School to create a course, whereby students will be able to create fiber optic field trips of their own and share them with others over the IEN and CILC.

The CILC presents a myriad of opportunities for collaboration and interactive learning throughout the world. Most high schools connected with the CILC have the ability to receive these presentations. However, at Sugar-Salem High School we have the technological capability to produce these presentations, or fiber optic field trips, and send them out to other schools throughout the state, nation, and conceivably, the world. With green screen technologies Sugar-Salem High School students would be able to create and present fiber optic field trips of benefit to students in other schools. Our school is located within easy driving distance of many natural wonders like Yellowstone National Park, Craters of the Moon, Harriman State Park, Grand Teton National Park, and the St. Anthony Sand Dunes. We are also located within Idaho's agricultural heartland. All of these attractions would provide content that students from around the nation could see and learn from, all the while, being taught by students from Sugar Salem via a fiber optic field trip.

During the production process, students would be given the opportunity to create fiber optic field trips using green screen and video editing technologies. In addition, students would have the opportunity to teach other students both the subject matter and how to use the technologies. Research shows that when a student teaches others, she learns the material more effectively (Leelawong, K. et. all, 2001). Our students would also collaborate and interact with students from different geographical areas and cultures. All of these factors together create an enriching educational experience for every student.

It is the intention of Sugar-Salem High School, if selected to receive this grant, to create a course in which students would plan, produce, and present these fiber optic field trips in cooperation with our science department. Local news agencies and production companies have aided in the development of the project, and the IEN has agreed to donate the time of their audio visual engineers and instructors to help in the initial training of our students. After these students have been trained, the class would become student driven and training would be from student to student. After the field trips have been produced, they will be posted on the CILC website for scheduled use by any school in the world.

In summary this would help students in the following ways:

1. Sugar-Salem students would collaborate in real time with students from different places and walks of life, thus enriching our students' rural life perspective.
2. Sugar-Salem students would be responsible for the planning, preparations, and production of all presentations.
3. Sugar-Salem students would become the teachers of both content and technical issues, allowing for increased retention of information.
4. Sugar-Salem students would gain valuable experience in working with computer and video editing technologies that will give them an added advantage as they progress into their post-secondary education.

Current Innovation

Students and teachers at Sugar-Salem High School currently use the CILC and the IEN in numerous ways. There are approximately 54 students currently signed up to take college courses presented over the Idaho Education Network. Our psychology teacher is currently broadcasting a psychology course to three other school districts in Idaho. He will teach another course during the third trimester. One of our health teachers will broadcast a Health 101 class to three other schools. During the 2009-2010 school year one of our teachers collaborated with a school in New Jersey on a novel that they had both read. Another teacher took his students to the National Holocaust Museum and talked live with a Holocaust survivor. Another teacher connected, via the IEN, with Chris Crowe, the author of *Mississippi Trial, 1955*, a book they were reading, and students were allowed to ask questions and listen to explanations from the author directly. None of these would have been possible without the aid of the IEN and CILC.

Measuring the impact of experiences like this on a student's education can be difficult to quantify. However, following is a set of comments from students regarding their experiences with the Holocaust survivor over the IEN:

> That was the most amazing thing that I could EVER experience in my life to witness that....I will never forget about this day, it truly gave me a different look on the Holocaust. I could really feel his pain, but only imagine, no one can really understand how it felt to be in there, but just to imagine that is already awful. This was incredible...
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> This experience will forever change and impact my life. His experiences have touched me greatly and have given me a different perspective of life. I still can't comprehend how he was able to survive, even today to go on with daily life with all those horrible images of loved ones buried in heaps of dead people. The story he told us, when he got shot and had to hide, it is just unbelievable how he survived time and time again. Even after everything that had happened he still has a positive outlook on life and tries to influence others for the better. He is a true hero.

The students interviewing the author of *Mississippi Trial, 1955* were able to ask questions such as, "What drew you to write this story?" and "Why do you think the whites in the South had so much hate for the blacks?" The teacher of the class indicated that "(s)tudents recognized and better understood the power of hate and intolerance. This experience caused students to question how they treat others."

While these experiences cannot show quantifiable data towards student achievement, there were definite qualitative gains made by students as a result of these innovations. We seek to extend those gains by allowing students to be an integral part of the creation and collaboration of these projects.

Project Narrative

--Project Description

Our intention is to create a class entitled, Media Creations, which will use digital video editing technologies, green screen technologies, the Center for Interactive Learning and Collaboration (CILC), and the Idaho Education Network (IEN) whereby students will be able to plan, produce, and present fiber optic field trips to other students around the state, country, and possibly, the world.

Sugar-Salem High School will add a video editing and collaboration class to its course schedule for both the fall and spring trimesters. The first part of the class will be dedicated to teaching the students how to use the new technology. Students will receive training on using and teaching through the IEN from IEN staff members. They will also participate in at least one collaboration created by another school system to gain experience with the project. Finally, they will receive training from our technology instructor on the use of the video editing equipment and the green screen technology.

Following the initial instruction students will be required to work with at least one of Sugar-Salem High School's science classes in creating a fiber optic field trip that will be presented to another school. These projects can take several forms. The video editing students and the science courses will decide on a learning objective that features some distinctive location in the area like Yellowstone National Park, Craters of the Moon, or the Civil Defense Caves, to name a few. From that objective the video editing students will have to plan how to best present the material in a video presentation format. Then, both students from the video editing course and the science course will travel to the location and video the necessary pieces of information. For example, if students were going to create a fiber optic field trip about the geyser system of Yellowstone National Park, they would go to Yellowstone and film different geysers and displays in the park and possibly interview park rangers giving explanations about the geysers. (We have contacted Yellowstone National Park's educational outreach representative and he has given his support to projects we might put together in the park.)

After the students have gathered the materials, students in the video editing class will take the material and create a presentation from that information. They will consult with students in the science class and will incorporate video, live feed information, and green screen technologies. The use of a green screen in the presentation will allow students to create a fully interactive presentation for anyone who is willing to participate on CILC. Students will then be required to post and present at least one presentation to another group through the CILC.

Since Sugar-Salem students will be leading other students through the fiber optic field trips, our students will be incorporating teamwork, technology, collaboration, and communication.

--Team Members

The team members for this grant include, but are not limited to, Marc Gee (assistant principal and science teacher), Jim Winn (technology teacher and IEN coordinator), Spencer Cook (district technology director), Jared Gee (science teacher), and Jay Miller (science teacher). Marc Gee will act as lead teacher and will oversee the project. Spencer Cook and Jared Gee will be responsible for the purchase and set up of equipment. Jim Winn will be responsible for the classroom and curriculum. Marc Gee, Jared Gee, and Jay Miller will be responsible for the integration of the video editing class with existing science courses. While these projects will initially be geared toward the science curriculum, it is the hope of the grant writing team that other teachers will see the benefits of the system and find application in their own fields of study

--Feasibility

This project is ready to move as soon as the equipment is purchased. Sugar-Salem High School administration and school board have approved the new course, Media Creations, which will be available for students to register for in the spring of 2011 in anticipation of the 2011-2012 school year. The IEN technologies will have been in place and in use for more than a year when the classes begin, and we anticipate that many of the students involved in the class will have already had multiple experiences using the technology through courses taken and virtual field trips viewed as part of our current curriculum.

The CILC program is well established within the educational community and is user friendly for those wishing to contribute to their collection of collaborations, field trips, and presentations.

--Sustainability
From a technological standpoint, this project is easily sustainable. After the initial investment of materials from the grant funding, the only additional funding required is that of regular classroom materials (i.e. paper, printer cartridges, etc), which the high school has committed to provide. The major items like the video camera and computer will also be under warranty protecting the investment from major catastrophes.

The knowledge and information will be perpetuated through the students. Students involved in the course will be required to help future students understand and use the equipment. They will also be required to keep a journal detailing their projects and what improvements could have been made to their approach. These journals will be kept for use by future classes by the school technology teacher, who will also provide needed experience and expertise to the project.

--School/District Support
Sugar-Salem School District and high school are in full support of the project. Sugar-Salem High School strives to be at the forefront of innovation in distance learning. Sugar-Salem High School recently required all students to take an online or distance education course before graduation. Sugar-Salem High School also led the way in developing distance education courses with several schools in south eastern Idaho. For the administration, this project is simply the next step in a series of innovations from which students at Sugar-Salem High School will benefit.

The high school has committed the class to its permanent schedule of courses and has pledged the cooperation in allowing students from the fiber optic field trip courses the flexibility that will be required to collaborate with the science courses being taught during the same trimester. The district has also committed resources such as bussing, faculty time, and collaboration time to the project.

--Anticipated Outcomes/Impact
As stated earlier, the benefits of a project like this might be difficult to quantify; however, in an increasingly technologically dependent world, giving students access to opportunities such as this will prove invaluable. More and more, we as a society are using the Web 2.0 in our day-to-day lives. Our job as educators is to prepare our students for this future. This course will give the students involved much needed experience with these types of technologies.

Students will also gain valuable collaboration skills. According to educational scholar Ken Robinson in his lecture "Changing Paradigms—How we implement sustainable change in education" one of the greatest skills students can learn from school is the ability to collaborate. This project provides a medium for such collaboration. We anticipate that our students will not only collaborate with other students in our school, but also with students from other schools, thus providing all students involved with an enriching educational experience.

The final outcome of this project is that the demand for the class will be so high that the school would find it necessary to create another room with distance education capabilities, that could be totally dedicated to the creation and presentation of fiber optic field trips.

Students will gain a greater understanding of the scientific concepts they are teaching as a result of their preparations. Anyone who has ever taught can attest to the learning that goes on in preparing to teach. This project would provide a rare experience for students to create, collaborate, communicate, and teach through the fiber optic medium.

Scope and Sequence

The timeline for the fiber optic field trip project will be as follows:

- January 2011 – Receive funding from the state
- February 28, 2011 – Purchase of all materials complete
- March 15, 2011 – All materials have been assembled and inspected
- April 10, 2011 – Meet with student body to explain new course and opportunities associated
- April 25, 2011 – Deliver registration materials and register students for new course
- June 2011 – Technology director and technology teacher familiarize themselves with equipment
- August 2011 – Begin first course
- September 2011 – Present course and initial phases of presentations to students and teachers from school districts already involved in distance education with Sugar-Salem High School. Also, create and send video of students using the technology to the Idaho State Department of Education
- September 30, 2011 – Submit online report to Idaho State Department of Education detailing, expenditure of funds, implementation of the course, and an accounting of our presentation.
- November 21, 2011 – Due date for first trimester student presentations.
- November 30, 2011 – First course ends. Student feedback is recorded.
- December 2011 – Grant team will meet and evaluate course objectives and outcomes and make necessary adjustments before the implementation of the second course. Student journals and feedback will be reviewed.
- March 5, 2012 – Begin second course.
- May 23, 2012 – Due date for third trimester student presentations.
- May 30, 2012 – Second course ends. Student feedback is recorded.
- June 2012 – Grant team will evaluate course objectives and outcomes. Student journals and feedback will be reviewed.

At the end of the first trimester course, the team members will meet to discuss the project and evaluate the objectives and outcomes of the course. Items that will be discussed are to include but not be limited to the following:

- Was the overall experience in the class a positive one for those involved?
- Were there technical difficulties that made it difficult or impossible to achieve any of the class objectives?
- Were there conflicts in the collaboration between video team and science classroom students that inhibited the achievement of the project's goals?
- Was there sufficient time in the course to achieve the desired objectives?
- Were there scheduling and/or transportation issues that need to be addressed?
- Did the final project have a professional look and high quality standard?
- Were there issues with the CILC that need to be resolved?
- Were students given sufficient opportunities to lead and collaborate?

All of these concerns will be resolved before the beginning of the spring 2012 course. This process will be repeated after the spring course and in subsequent courses in following years. By so doing, the team members will ensure that the integrity of the course continues to strengthen as the years pass by. At the end of each course, students will also be given a chance to give their feedback on all aspects of the course and technology. This feedback will be reviewed by the grant team and taken into consideration before the next course starts.

Budget Narrative

In order for our students to be able to take other students around the world on a fiber-optic field trip we need to purchase equipment and software that will allow us to do so.

The primary purchase is the Panasonic AG-HPX170 camcorder. It is a highly-recommended camcorder that may be purchased from B&H Photo online, as well as the other accessories necessary to make the camcorder operation work smoothly. The camera records directly onto a solid-state hard drive, and one is included in the base cost of the camcorder. To insure that our students are able to take plenty of footage on-site, additional hard drives and battery packs will also be purchased. Other accessories include a mountable microphone, a UV filter to protect the lens, a telephoto lens to improve film quality, cables, a tripod, and a carrying case. The total cost of the camera and all the accessories comes to $6,821.05 after shipping.

We also need a green screen to use when broadcasting our field trips to other schools. The ePhoto 10'x20' Chroma Key Screen Kit with two lights will allow us to do so. The total cost from Amazon.com is $149.99.

A video switcher will also be necessary to allow us to incorporate processed footage into a live broadcast our students are hosting, and will cost $568.91 after shipping from FederalStereo.com.

We will also need software to process and cut our footage to include what we need. A combination of Adobe Premiere CS5 and Adobe Visual Communicator 3 will allow us to make the necessary edits to our videos and maintain a professional, streamlined look. Because Adobe offers educational discounts to high schools, both can be obtained for a total of $518.

A computer will be necessary to put all this together. An HP Pavilion Elite HPE-400z PC that comes with a monitor will give us the necessary storage and processing power to run the Adobe software for our video production. Priced from HP's website it will cost $1903.98. Altogether, the total cost of our setup will be $9961.93.

Budget Spreadsheet

Budget for using chroma keying technology to host fiber optic field trips				
Capital Objects	**Quantity**	**Price per Unit**	**Shipping Cost**	**Subtotals**
SIMA SFX-9 Digital Effects Video Mixer	1	$519.19	$49.72	$568.91
HP Pavilion Elite HPE-400z PC w/Monitor	1	$1,903.98		$1,903.98
Adobe Premiere CS5 Pro (Educational Discount)	1	$349.00		$349.00
Adobe Visual Communicator 3 (Educational Discount)	1	$169.00		$169.00
ePhoto 10' x 20' Chroma Key Screen Kit	1	$149.99		$149.99
Panasonic AG-HPX170 Camcorder (with accessories)	1	$3,995.00	$16.35	$4,011.35
Telephoto Lens	1	$99.95		$99.95
Battery Pack	3	$139.99		$419.97
P2 Card (Storage)	3	$399.00		$1,197.00
Shotgun Microphone	1	$209.95		$209.95
Carrying Case	1	$139.99		$139.99
Tripod	1	$148.95		$148.95
UV Filter	1	$31.95		$31.95
P2 Memory Card Drive	1	$349.00		$349.00
Floodlight Kit	1	$179.95		$179.95
SDI Cables	1	$32.99		$32.99
			Grand Total	$9,961.93